

REMARKS/ARGUMENTS

In the Office Action mailed October 16, 2009 (hereinafter, "Office Action"), claim 50 was objected to, and claims 1-6, 8-14, 17-26, 28-34, 37-46 and 49-51 stand rejected under 35 U.S.C. § 103(a). Claims 1, 18, 21, 38, 41 and 50 have been amended.

Applicant respectfully responds to the Office Action.

Applicant thanks the examiner and his supervisor for conducting an interview on January 13, 2010 with counsel for Applicant. Applicant believes that he has incorporated the amendments suggested by the supervisor during the interview and thus believes that the application is in a condition for allowance.

I. Objection of Claim 50

Claim 50 was objected to because of informalities. It was noted by the Examiner that Claim 50 depended from the canceled claim 7. Claim 50 has been amended to address this objection as suggested by the Examiner. Accordingly, Applicants respectfully request that the objection to claim 50 be withdrawn.

II. Claims 1-6, 8-10, 17-26, 28-30, 37-43 and 49-51 Rejected Under 35 U.S.C. § 103(a)

Claims 1-6, 8-10, 17-26, 28-30, 37-43 and 49-51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0075572 to Boreczky et al. (hereinafter, "Boreczky") in view of U.S. Patent No. 6,711,741 to Yeo (hereinafter, "Yeo") further in view of U.S. Patent No. 7,366,241 to Matsui et al. (hereinafter, "Matsui"). This rejection is respectfully traversed.

The factual inquiries that are relevant in the determination of obviousness are determining the scope and contents of the prior art, ascertaining the differences between the prior art and the claims in issue, resolving the level of ordinary skill in the art, and evaluating evidence of secondary consideration. KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 2007 U.S. LEXIS 4745, at **4-5 (2007) (citing Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966)). As the Board of Patent

Appeals and Interferences has recently confirmed, “obviousness requires a suggestion of all limitations in a claim.” In re Wada and Murphy, Appeal 2007-3733 (citing CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003)). Moreover, the analysis in support of an obviousness rejection “should be made explicit.” KSR, 2007 U.S. LEXIS 4745, at **37. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” Id. (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Applicant respectfully submits that the claims at issue are patentably distinct from the cited portions of the cited references. The cited references do not teach or suggest all of the subject matter in the claims.

Claim 1 has been amended to recite:

obtaining the first plurality of video frames by requesting the specific video frames from the server by sending from the client system separate play requests for the video frames in accordance with a video streaming protocol, wherein a normal play time of each play request begins at T_i and ends at $T_i + d$, wherein T_i is a timestamp of an i^{th} video frame, and wherein d does not exceed one frame duration and the plurality of video frames are not identified prior to receiving the video.

Support for the recently added amendments is provided, for example, at Figures 1 and 3-4 and at paragraphs [43]-[45], [48]-[49] and [63]-[69] of the pending application.

The Office Action indicates that the foregoing subject matter is taught by a combination of Boreczky and Yeo. However, such a combination would render Boreczky unsatisfactory for its intended purpose. (See M.P.E.P § 2143.01 (“the proposed modification cannot render the prior art unsatisfactory for its intended purpose.”) (capitalization altered).)

Boreczky expressly teaches:

The present inventors have realized that playback devices can be made more user friendly by providing “snapshots” to reference positions within a data stream being played, even if indexed snapshots are not provided in the original data stream. . . .

* * * *

In streaming video applications, videos will often be indexed on the server-side and the index points together with their associated images will be available to the client.

However, as is the case with the majority of the video content available on the Internet, no server-side index exists. The present invention creates an index on-the-fly on the client side. For creating such an index, the client opens one or more streaming video connections in addition to a main connection used for playing back the video.

* * * *

... The server device 300 begins streaming the requested video 315 to the device 320.

To perform video indexing at points after the current playback position of the video stream 315, the device 320 opens a second connection 310 for transmission of look-ahead data of the video stream 315. Device 320 receives the look-ahead data 315, which is summarized, and keyframes are selected and utilized by the device 320 for making a display according to the present invention, having index video at points forward and behind a current playback position of the video stream 315. . . .

Boreczky, paragraphs [0009], [0022], and [0025]-[0026]. In contrast to Boreczky, Yeo discloses:

... RAPS [Random Access Playback System] first generates temporal snapshots of the source video frames and then maintains both the temporal snapshots and the source video frames in its server. After the server transmits the temporal snapshots to a client in RAPS, the client presents these temporal snapshots as individual images to a user. Moreover, RAPS allows the user to browse through and randomly select from these images.

* * * *

... Assuming the video source frames are those depicted in FIG. 4, TSG 300 generates shots, such as shots 402 and 404, and their corresponding temporal snapshots, such as temporal snapshots 406 and 408 from consecutive video frames 400. A shot is defined to be a sequence of images captured between a “record” and “stop” camera operation, or in other words, a segment of video source frames 106. A temporal snapshot, on the other hand, marks the beginning of a shot. One method of tracking these video frames and temporal snapshots is placing unique time stamps on them. For instance, temporal snapshot 406 is a video frame at time=10.

Yeo, col. 2, lines 59-66; and col. 3, lines 21-32. The foregoing is illustrated in Figure 4 of the Yeo, which is provided below:

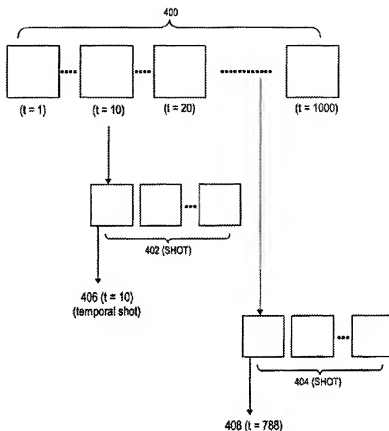


FIG. 4

The Office Action attempts to combine Boreczky and Yeo by suggesting that Boreczky could be modified by uploading a single frame, a temporal shot, of Yeo to achieve the claimed subject matter. (Office Action, pages 5-6.) However, such a modification of Boreczky would render this reference unsatisfactory for its intended purpose. Boreczky obtains secondary video streams to analyze those streams in order to identify “keyframes” to enable indexing “on-the-fly on the client side” of the video stream. (Boreczky, paragraphs [0009], [0022], and [0025]-[0026].) Clearly, obtaining a single frame, a temporal snapshot, from a server (as recited in Yeo) would not enable the analysis necessary to index or identify keyframes, *i.e.*, to determine whether those frames that are sufficiently different from adjacent frames to comprise “keyframes.” (Boreczky, *e.g.*, paragraph [0023].) Thus,

identification of “shots” and “temporal snapshots” on a server and transmission of those temporal snapshots to client, as provided for in Yeo, would not enable client-side indexing as set forth in Boreczky. (Yeo, *e.g.*, col. 3, line 8 through col. 4, lines 12.) Thus, the proposed modification of Boreczky would render this reference unsatisfactory for its intended purpose of client-side indexing of video streams on-the-fly. (See M.P.E.P § 2143.01.) Accordingly, Applicant respectfully requests withdrawal of this rejection.

Applicant also notes that claim 1 recites as follows: “obtaining the first plurality of video frames by requesting the specific video frames from the server by sending from the client system separate play requests for the video frames in accordance with a video streaming protocol, wherein a normal play time of each play request begins at T_i and ends at $T_i + d$, wherein T_i is a timestamp of an i^{th} video frame, and wherein d does not exceed one frame duration.” (emphasis added.) As further recited in claim 1, “displaying the first navigation video strip comprises retrieving the first plurality of video frames from the server and displaying corresponding thumbnail images.” As a result, the navigation strip of the claimed subject matter includes displaying video obtained by separate play requests with a beginning (T_i) and end time ($T_i + d$) that “does not exceed one frame in duration.” The Office Action acknowledges that Boreczky does not teach this subject matter and relies on Yeo to do so. (Office Action, pages 5-6.) Applicant, however, respectfully submits that this subject matter is not taught or suggested by Yeo.

Yeo explains:

After the server transmits the temporal snapshots to a client in RAPS, the client presents these temporal snapshots as individual images to a user. Moreover, RAPS allows the user to browse through and randomly select from these images. When the user chooses an image, RAPS plays back the selected image’s corresponding segment of the source video frames independent from other downloading or playing back of the source video frames. As a result, the user can preview segments of the source video frames before depleting precious network bandwidths to download the entire source video frames. At the same time, the server needs only to maintain one copy of the source video frames.

Yeo, col. 2, line 62 through col. 3, line 7.

Thus, Yeo involves transmitting the temporal snapshots to the client. If a user selects one of the temporal snapshots, the corresponding *segment of video* is sent from the server to be played at the client. Figure 4 of Yeo shows that such a segment (or shot 402, 404) involves multiple frames and thus does not involve a play request “not exceeding one frame in duration,” as recited in claim 1.

In addition, there is no indication that the temporal shots of Yeo are requested at a client device using “separate play requests” with a beginning and end time that “does not exceed one frame in duration.” Yeo merely states that temporal snapshots are transmitted to the client device (Yeo, e.g., col. 2 lines 62-65) and further explains that “server 100 responds to client 102’s selection of image 608 at time=30 by sending the corresponding segment of source video frames 106 beginning at time=30 to client 102,” i.e., more than one frame is requested. (Yeo, col. 4, lines 61-64; emphasis added.) There is no suggestion in Yeo that the temporal snapshots were obtained through a play request of any kind. Thus, the disclosure of Yeo clearly does not teach or suggest all of the identified subject matter of claim 1. Moreover, merely assigning time stamps to specific frames (Yeo, col. 3, lines 29-32) does not teach or suggest that Yeo involves “separate play requests” sent by a client system with a beginning and end time that “does not exceed one frame in duration,” as recited in claim 1.

In view of the foregoing, Applicant respectfully submits that claim 1 is patentably distinct from the cited references. Accordingly, Applicant respectfully requests that the rejection of claim 1 be withdrawn because Boreczky, alone or in combination with Yeo and Matsui does not teach or suggest all of the subject matter of claim 1.

Claims 2-6, 8-10, 17 and 50-51 depend either directly or indirectly from claim 1. Accordingly, Applicant respectfully requests that the rejection of claims 2-6, 8-10, 17 and 50-51 be withdrawn.

Claim 18 is being amended to recite “providing the first plurality of video frames to the client by receiving and responding to requests for the specific video frames from the client, wherein receiving the requests for the specific video frames comprises receiving separate play requests for the video frames in accordance with a video streaming protocol, wherein a normal play time of each play

request begins at T_i and ends at $T_i + d$, wherein T_i is a timestamp of an i th video frame, and wherein d does not exceed one frame duration and the plurality of video frames are not identified prior to receiving the video.” Claim 18 previously included the language “requests for the specific video frames from the client.” (Emphasis added.) As such, this subject matter did not need to be added by amendment. As discussed above, the cited portions of the cited references do not teach or suggest this claimed subject matter. Accordingly, Applicant respectfully submits that claim 18 is allowable. Claims 19-20 depend directly from claim 18, and are therefore allowable for at least the same reasons.

Claim 21 is being amended to recite “obtain the first plurality of video frames by requesting the specific video frames from the server by sending from the client system separate play requests for the video frames in accordance with a video streaming protocol, wherein a normal play time of each play request begins at T_i and ends at $T_i + d$, wherein T_i is a timestamp of an i^{th} video frame, and wherein d does not exceed one frame duration and the plurality of video frames are not identified prior to receiving the video” As discussed above, Boreczky, alone or in combination with Yeo and Matsui does not teach or suggest this claimed subject matter. Accordingly, Applicant respectfully submits that claim 21 is allowable. Claims 22-26, 28-30 and 37 depend either directly or indirectly from claim 21, and are therefore allowable for at least the same reasons.

Claim 38 is being amended to recite “wherein receiving the requests for the specific video frames comprises receiving separate play requests sent by the client for the video frames in accordance with a video streaming protocol, wherein a normal play time of each play request begins at T_i and ends at $T_i + d$, wherein T_i is a timestamp of an i th video frame, and wherein d does not exceed one frame duration and the plurality of video frames are not identified prior to receiving the video.” As discussed above, Boreczky, alone or in combination with Yeo and Matsui does not teach or suggest this claimed subject matter. Accordingly, Applicant respectfully submits that claim 38 is allowable. Claims 39-40 depend directly from claim 38, and are therefore allowable for at least the same reasons.

Claim 41 is being amended to recite “instructions for sending from the client separate play

requests for the plurality of video frames in the navigation video strip in accordance with a video streaming protocol, wherein a normal play time of each play request begins at T_i and ends at $T_i + d$, wherein T_i is a timestamp of an i^{th} video frame, and wherein d does not exceed one frame duration and the plurality of video frames are not identified prior to receiving the video.” As discussed above, Boreczky, alone or in combination with Yeo and Matsui does not teach or suggest this claimed subject matter. Accordingly, Applicant respectfully submits that claim 41 is allowable. Claims 42-43 and 49 depend either directly or indirectly from claim 41, and are therefore allowable for at least the same reasons.

III. Claims 11-14, 31-34 and 44-46 Rejected Under 35 U.S.C. § 103(a)

Claims 11-14, 31-34 and 44-46 stand rejected under 35 U.S.C. § 103(a) based on Boreczky in view of Yeo in view of Matsui and further in view of U.S. Patent No. 6,747,674 to Asami (hereinafter, “Asami”). Applicant respectfully requests reconsideration in view of the above claim amendments and the following remarks.

Claims 11-14 depend either directly or indirectly from claim 1. Claims 31-34 depend either directly or indirectly from claim 21. Claims 44-46 depend directly from claim 41. Accordingly, Applicant respectfully requests that the rejection of claims 11-14, 31-34 and 44-46 be withdrawn.

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Reply to Office Action of October 16, 2009

IV. Conclusion

Applicant respectfully asserts that all pending claims are allowable over the cited references, and requests that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,

/Wesley L. Austin/

Wesley L. Austin
Reg. No. 42,273
Attorney for Applicant

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AUSTIN RAPP & HARDMAN
170 South Main Street, Suite 735
Salt Lake City, Utah 84101
Telephone: (801) 537-1700